

Attorney Docket No.: J6497(C)  
Serial No.: 09/826,498  
Filed: April 4, 2001  
Confirmation No.: 3031

**BRIEF FOR APPELLANT**

Sir:

This is a Brief on appellant's Appeal from the Examiner's Final Rejection concerning the above-identified application.

The Commissioner is hereby authorized to charge any additional fees, which may be required to our deposit account No. 12-1155, including all required fees under: 37 C.F.R. §1.16; 37 C.F.R. §1.17; 37 C.F.R. §1.18.; 37 C.F.R. §1.136.

**BRIEF FOR APPELLANT**

**TABLE OF CONTENTS**

I.	REAL PARTY IN INTEREST	3
II.	RELATED APPEALS AND INTERFERENCES	4
III.	STATUS OF CLAIMS	5
IV.	STATUS OF AMENDMENTS	6
V.	SUMMARY OF CLAIMED SUBJECT MATTER	4
VI.	GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL	9
VII.	APPELLANT'S ARGUMENT	10
VIII.	CLAIMS APPENDIX	15
IX.	EVIDENCE APPENDIX	18
X.	RELATED PROCEEDINGS APPENDIX	19

## **I. REAL PARTY IN INTEREST**

Unilever Home & Personal Care USA, Division of Conopco, Inc. is the real party in interest.

## **II. RELATED APPEALS AND INTERFERENCES**

A Notice of Appeal was filed in parent application Serial No. 09/275,149, however, subsequent to filing that Notice of Appeal, applicants filed the subject application and allowed the parent application to go abandoned by failing to file an Appeal Brief. There are no other prior or pending appeals, interferences or judicial proceedings known to appellant, the appellant's legal representative, or assignee which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending Appeal.

### **III. STATUS OF CLAIMS**

Claims 19-25, 29 and 31 are rejected and on appeal. Claims 27, 28, 30 and 32 are allowed. Applicants note that the Examiner is correct that claim 33 depends on a cancelled claim; accordingly, no challenge to the propriety of the rejection is made in this appeal.

#### **IV. STATUS OF AMENDMENTS**

All amendments presented prior to the Final Rejection dated February 27, 2006 have been entered; no amendments were submitted after the Final Rejection.

## **V. SUMMARY OF CLAIMED SUBJECT MATTER**

The claims on appeal are summarized as follows:

Independent claim 19 is directed to a hair styling composition comprising (a) from about 0.04 to less than 1.5% active of a holding polymer, (b) hydroxyethyl cellulose, and (c) a selected carrier, wherein the ratio of holding polymer (a) to hydroxyl ethyl cellulose (b) is about 1: 2.2 to about 1:0.4 and the holding polymer comprises a monomer combination of vinyl caprolactam, methacrylamidopropyl dimethylamine and vinylpyrrolidone. See the specification at page 6, paragraph 3; page 6, the last line of the last paragraph to page 7, the first line of the first paragraph; page 10, paragraph 1; and Table 1, Examples B, D, F, G, H and I.

Claim 20, dependent on claim 19, specifies the ratio of (a) to (b) as about 1: 0.4. See Table 1, Example B.

Claim 21, dependent on claim 19 specifies the ratio of (a) to (b) as about 1:0.7. See original claim 1 and Table 1, Example C.

Claim 22, dependent on claim 19, specifies the ratio of (a) to (b) as about 1:1. See Table 1, Example D.

Claim 23, dependent on claim 19, specifies the ratio of (a) to (b) as about 1:1.3. See Table 1 Example F.

Claim 24, dependent on claim 19, specifies the ratio of (a) to (b) as about 1:1.6. See Table 1, Example G.

Claim 25, dependent on claim 19, specifies the ratio of (a) to (b) is about 1:1.9. See Table 1, Example H.

Claim 29, dependent on claim 19, specifies the holding polymer as consisting essentially of a polymer which comprises a monomer combination of vinyl caprolactam, methacrylamidopropyl dimethylamine and vinyl pyrrolidone. See the Table 1 Examples which describe the Polymer 1189 component as a terpolymer of vinyl pyrrolidone/vinyl caprolactam and 3-(N-dimethylaminopropyl) methacrylamide.

Claim 32, dependent on claim 19, specifies the holding polymer as being present in the composition in an amount of from about 0.04 to about 1.25% active. See page 6, paragraph 3.

Claim 33 is dependent on a cancelled claim and its rejection is not being contested.

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The grounds of rejection to be reviewed on appeal are:

- A. The rejection of claims 19 to 25, 29 and 31 under 35 U.S.C. §103(a) over Peffly (US 5985294) in view of Samain et al. (US6511651) and Maurin et al. (US 6403542).

## VII. APPELLANT'S ARGUMENTS

- a) Claims 19 to 25, 29 and 31 are not obvious over Peffly (US 5985294) in view of Samain et al. (US6511651) and Maurin et al. (US 6403542).

Holding polymers, including acrylic and vinyl polymers are common ingredients found in hair styling compositions. The prior art discloses a broad range of levels at which holding polymers can be present in hair styling compositions. As higher levels of holding polymer are employed the degree of hold generally increases, however, such levels of the holding polymer may generate flaking due to easy elimination of the polymer (particularly acrylic and vinyl polymers which tend to have high water solubility and low substantivity on hair fibers) from the hair by combing and brushing.

Additionally, high levels of holding polymer may have a negative impact on the sensory properties of the treated hair (i.e. poor hair feel). Low levels of holding polymer may result in insufficient hold or curl retention.

Pursuant to the subject invention it was found that hair styling compositions having desirable hold and sensory properties could be formulated using low levels (i.e., from about 0.04 to less than 1.5% active) of holding polymer in conjunction with a hydroxyethyl cellulose (a polysaccharide) and employing particular holding polymer to hydroxyethyl cellulose ratios, the holding polymer comprising a terpolymer which comprises a monomer combination of vinyl caprolactam, methacrylamidopropyl dimethylamine and vinylpyrrolidone, the ratio of holding polymer to hydroxyethyl cellulose being about 1:2.2 to about 1: 0.4.

Peffly is concerned with personal care compositions, especially hair styling compositions that contain from 0.01 to about 20% of a non-silicone containing polymer suitable for hair styling, and an organopolysiloxane microemulsion containing an organopolysiloxane dispersed as particles in the microemulsion having a particular

particle size. A variety of materials are disclosed as suitable non-silicone-containing hair styling polymers including a nonionic, anionic, cationic, and amphoteric polymers, including for example, Polyquaternium-4, Polyquaternium-11, Polyquaternium-16, PVP/dimethylaminoethylmethacrylate, vinyl caprolactam/PVPdimethylaminoethyl methacrylate copolymer, chitosan, Polyquaternium-7, Polyquaternium-18, Polyquaternium-24, Polyquaternium-28, Polyquaternium-46, chitosan glycolate, hydroxyethyl cetyltrimonium phosphate, guar hydroxypropyl trimonium chloride, octylacrylamide/acrylates/butylaminoethyl methacrylate copolymer, methacryloyl ethyl betaine/methacrylate copolymer, Polyquaternium-47, carboxyl butyl chitosan, dicarboxyethyl chitosan, polyvinylpyrrolidone, PVP/DMAPA acrylates, PVP/VA/vinyl propionate copolymer, hydroxypropyl guar gum, VA/crotonates/vinyl neodcanoate copolymer, butyl ester of PVM/MA, acrylates/acrylamide copolymer, methacrylate copolymer, vinyl acetate/crotonic acid copolymer and others.

There is nothing in Peffly that discloses or suggests the problems formulating hair styling compositions containing the levels of styling polymers required by the subject claims or the selection of a holding polymer comprising the subject terpolymer and its use with hydroxyethyl cellulose in the ratios set forth in the subject claims as a means of providing styling compositions having desirable hold and sensory properties. In short, it is submitted that the citation fails to provide an enabling disclosure as to how to achieve effective curl retention at the very low holding polymer levels of the subject claims.

Reference has been made to Example III of Peffly which has been characterized as "a hair styling gel composition comprising 3% by weight of PVP/VA copolymer (50% active) and 1% by weight of hydroxyethyl cellulose, the ratio of the holding copolymer to hydroxyethyl cellulose is 1: 0.66 which meets the weight ratio limitation of two hair holding polymer of instant claims 19(c) [sic] and 20-22". In actuality, Example III of Peffly is directed to a composition which contains 2.00 wt.% of PVP, 3.00 wt. % (50%

active) of a PVP/VA copolymer, and 1.00 wt.% of hydroxyethyl cellulose. Thus, on an actives basis, the total amount of holding polymer is 3.50 wt. % (2.00 wt.% PVP + 1.50 PVP/VA copolymer), an amount more than double the maximum level (less than 1.50%) set forth in the subject claims. Moreover, the ratio of holding polymer to hydroxyethyl cellulose described by this example is in fact 3.50:1.00, an amount well outside the claimed range of about 1:2.2 to about 1:0.4 (it being noted that the ratio of ratio of 1:0.4 may also be written as 2.25:1). If anything, Example III of Peffly would disclose to one skilled in the art the use of holding polymer in an amount that exceeds the levels of the subject claims when the holding polymer is a VP-containing holding polymer.

The data in Table 1 of the subject composition provides curl retention data for compositions having holding polymer to hydroxyethyl cellulose ratios of 1:2.2 to 1.0:0.1. In compositions A to I, the amount of holding polymer was constant (1.25% active), and the amount of hydroxyethyl cellulose varied. Composition A (holding polymer to hydroxyethyl cellulose ratio of 1.0:0.1 (which may also be written as 10:1) provided significantly lower curl retention values than Compositions B through I, i.e., Composition A failed to provide desirable hold. Moreover, Composition B (holding polymer to hydroxyethyl cellulose ratio of 1.0:0.4), had considerably better curl retention than Composition E (holding polymer to hydroxyethyl cellulose ratio of 1.0:0.2 (which may also be written as 5:1). The Table 1 data also shows that as the hydroxyethyl cellulose level increased, the holding performance of the compositions first increased and then decreased. The air dry data of Test 1 (6 hours) revealed the highest curl retention (in the 90% region) for Examples B and C (holding polymer to hydroxyethyl cellulose ratios of 1.0: 0.4 and 1.0:0.7, respectively), with somewhat lower curl retention (83.8%, 83.3% and 80.1%, respectively) being shown for the higher hydroxyethyl cellulose content compositions of Compositions G, H and I. Thus, it was shown that hair styling compositions having both low levels of holding polymer and desirable curl retention

properties could be produced using the claimed holding polymer and hydroxyethyl cellulose, and employing certain holding polymer to hydroxyethyl cellulose ratios.

To summarize, there is nothing in Peffly that would disclose to one skilled in the art that effective curl retention could be achieved using the low levels of holding polymer set forth in the subject claims by inclusion of hydroxyethyl cellulose and the employment of the claimed holding polymer to hydroxyethyl cellulose ratios.

Samain et al. discloses aerosol devices based on alcoholic compositions of fixing materials comprising vinyllactam units. The fixing polymers therein described include acrylic acid copolymers such as acrylic acid/ethyl acrylate/N-t-butylacrylamide terpolymer, crotonic acid/vinyl acetate/vinyl t-butylbenzoate terpolymer, methacrylic acid/ethylacrylate/t-butyl acrylate terpolymer and grafted silicone polymers. The exemplified terpolymer is vinylcaprolactam/vinylpyrrolidone/dimethylaminoethyl methacrylate terpolymer. There is nothing in the citation that discloses or suggests a combination of holding polymer and hydroxyethyl cellulose, let alone the claimed ratio of holding polymer and hydroxyethyl cellulose. Moreover, in the exemplified compositions, the level of the vinylcaprolactam/vinylpyrrolidone/dimethylaminoethyl methacrylate terpolymer in the base fluid ranged from 4.0g to 9.0g (as active material per 100 g of ethanol. (approximately 3.8 wt. % (Example 3 –Composition F) to approximately 8.2 wt. % (Example 1, Composition B). These compositions, together with propellant, were introduced to aerosol devices; Composition B being introduced at a level of 37%, to provide a composition that contained about 3.0% of holding polymer, and Composition F being introduced at a level of 65% to provide a composition that contained approximately 2.4% of holding polymer. There is nothing in the citation that cures the deficiencies of Peffly or that suggests compositions containing the combination of holding polymer and hydroxyethyl cellulose as required by the subject claims, or the ratio of holding polymer to hydroxyethyl cellulose set forth in the subject claims.

Maurin et al. is directed to shampoo compositions containing a vinylactam cationic polymer and an acrylic terpolymer. There is nothing in the citation that discloses the claimed hair styling compositions, the combination of holding polymer and hydroxyethyl cellulose as required by the subject claims, or the ratio of holding polymer to hydroxyethyl cellulose set forth in the subject claims.

In view of the remarks set forth above, allowance of the claims that are the subject of this appeal is respectfully requested.

Respectfully submitted,



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## VIII. CLAIMS APPENDIX

Claim 19 A hair styling composition comprising:  
(a) from about 0.04% to less than 1.5% active of a holding polymer;  
(b) hydroxyethyl cellulose; and  
(c) a carrier selected from the group consisting of methanol, ethanol, N-propanol, isopropanol, and a mixture thereof;  
wherein the ratio of (a) to (b) is about 1:2.2 to about 1:0.4, and the holding polymer comprises a polymer which comprises a monomer combination of vinyl caprolactam, methacrylamidopropyl dimethylamine and vinylpyrrolidone.

Claim 20 A hair styling composition according to claim 19 wherein the ratio of (a) to (b) is about 1:0.4.

Claim 21 A hair styling composition according to claim 19 wherein the ratio of (a) to (b) is about 1:0.7.

Claim 22 A hair styling composition according to claim 19 wherein the ratio of (a) to (b) is about 1:1.

Claim 23 A hair styling composition according to claim 19 wherein the ratio of (a) to (b) is about 1:1.3.

Claim 24 A hair styling composition according to claim 19 wherein the ratio of (a) to (b) is about 1:1.6.

Claim 25 A hair styling composition according to claim 19 wherein the ratio of (a) to (b) is about 1:1.9.

Claim 29 A hair styling composition according to claim 19 wherein the holding polymer consists essentially of a polymer which comprises a monomer combination of vinyl caprolactam, methacrylamidopropyl dimethylamine and vinyl pyrrolidone.

Claim 31 A hair styling composition according to claim 19 wherein the holding polymer is present in the composition in an amount of from about 0.04% to about 1.25% active.

Claim 33 A composition according to claim 1, wherein the holding polymer consists essentially of a polymer which comprises a monomer combination of vinyl caprolactam, methacrylamidopropyldimethylamine and vinylpyrrolidone.

IX. EVIDENCE APPENDIX

None.

X.      **RELATED PROCEEDINGS APPENDIX**

None.